

Appl. No. 10/686,357
Reply to Office Action of September 18, 2006

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REMARKS/ARGUMENTS

The claims are amended to overtly state that the method produces steel with a tensile strength of not less than 780 MPa. As described on page 8 in the first paragraph, if the number of fine precipitates with a grain size smaller than 10 nm is $2 \times 10^5/\mu\text{m}^3$ or larger, a TS of not lower than 70 MPa can surely be obtained. Also, as summarized at page 12, third paragraph, much higher tensile strength can be obtained.

The importance of the requirements of the present claims, can be seen in the discussion on pages 12-15 concerning each component, especially to attain the TS of 780 MPa.

The Examples also exemplify such steel, e.g. Table 2 on page 22.

The claims are rejected as unpatentable over JP (185). The Examiner considers there is sufficient overlap of some requirements as to render the present invention obvious.

Because of the differences of structures and precipitates, when Steel E (0.047%C-0.01 %Si-1.62%Mn-0.91%Cr-0.05%Mo-0.143 Ti) in Table 2 of JP ('185) is compared with Steel A (0.045 %C-0.05%Si-1.67%Mn-0.056%Cr-0.20%Mo-0.085 %Ti), tabulated in Table 1 of the present application, having a composition

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similar to that of the above-mentioned Steel E, except a ratio of Mo and Ti and a Cr content, TS of Steel E is 716MPa at most while the value of Steel A of the present application is 821MPa, which is more than 100MPa higher. This indicates that in securing a same strength for a steel of the present application, a total amount of addition elements, starting with C, can be reduced to an amount, which remains within the range of the present claims. The decrease of the total addition amounts is considered to be extremely advantageous as a practical matter for not only curtailment of manufacturing costs but also from the viewpoint of weldability and delayed fracture, for which, an increase of C in particular is said to be not desirable.

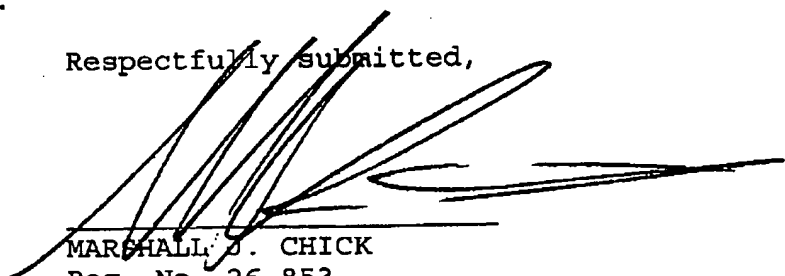
This advantage could not be predicted from the art.

In view thereof, the evidence of the advantage of the present invention over the art is in the record.

Withdrawal of the rejection and allowance of the application are respectfully requested.

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Respectfully submitted,



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